Appl. No. 09/447,301 Amdt. Dated December 24, 2003 Reply to Office Action of July 24, 2003

## **IN THE CLAIMS:**

Please amend the claims as follows:

1. (Currently Amended) A solid-state image-pickup device having:

a sensor array comprising a plurality of sensors; and

a plurality of transfer registers for transferring signal charges from said sensors of said sensor array,

at least one horizontal-horizontal transfer register is formed between said transfer registers for storing and transferring said signal charges;

wherein an accumulation gate <u>is provided between said sensor array and said transfer registers</u> for reading out signal charges from said sensors at <u>the a</u> same time, accumulating said signal charges and allocating said signal charges to said transfer registers—is provided between said sensor array and said transfer registers.

- 2. (Original) A solid-state image-pickup device according to claim 1, further comprising a read-out gate provided between said array of sensors and said accumulation gate.
- 3. (Currently Amended) A solid-state image-pickup device according to claim 1, wherein said accumulation gate sets <u>creates</u> a difference in electric potential oriented in <u>a</u> direction of transfer a transfer direction.
- 4. (Currently Amended) A solid-state image-pickup device according to claim 1 wherein signal charges of said sensors are accumulated stored in said accumulation gate to be allocated in units of electrical charge each originated by one of said sensors.
- 5. (Currently Amended) A solid-state image-pickup device according to claim 1 wherein signal charges of said sensors are allocated to said respective transfer registers for

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each odd sensor and each even sensor of said sensor array.

6. (Currently Amended) A method of driving a solid-state image-pickup device having: a sensor array comprising a plurality of sensors;

a plurality of transfer registers for transferring signal charges from said sensors of said sensor array; and

at least one horizontal-horizontal transfer register formed between said transfer registers for storing and transferring said signal charges;

an accumulation gate provided between said sensor array and said transfer registers, said method comprising the steps of:

reading out signal charges from <u>all of said sensors in a row closest</u> to said accumulation gate at the <u>a</u> same time;

allocating said signal charges of said sensors from said accumulation gate to said transfer registers; and

driving said transfer registers to output said signal charges.

- 7. (Original) A method of driving a solid-state image-pickup device according to claim 6 whereby said transfer registers are driven at the same time.
- 8. (Currently Amended) A method of driving a solid-state image-pickup device according to claim 6 whereby signal charges of said sensors are allocated to said respective transfer registers for each odd sensor and each even sensor of said sensor array.

## Please add the following new claims:

9. (New) The solid-state image-pickup device according to claim 1, wherein said horizontal-horizontal transfer register has a same number of columns as said transfer registers.

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10. (New) The method of driving a solid-state image-pickup device according to claim 6, wherein said horizontal-horizontal transfer register has a same number of columns as said transfer registers.

11. (New) The solid-state image-pickup device according to claim 2, said accumulation gate and said read-out gate share a common gate electrode.

12. (New) The method of driving a solid-state image-pickup device according to claim 6, wherein said step of reading out and said step of allocating are carried out through a common gate electrode.